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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,782	10/22/2001	Hiroyuki Ishikawa	215204US0X	8403

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EXAMINER

EGAN, BRIAN P

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 03/03/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,782

Applicant(s)

ISHIKAWA ET AL.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-11 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the Examiner has failed to provide reasons and/or support for the conclusion that the product as made can be used in a materially different process and has further failed to demonstrate that the proposed alternative methods of forming are materially different than the irradiation and heating method claimed by the Applicant. This is not found persuasive because it is notoriously well known in the release layer art that multiple methods exist to remove removable layers. As previously stated by the Examiner, these alternatives include die cutting, manual separation, and acidic or basic treatment of the removable layer. Each of these alternative methods are materially different from irradiation. While the irradiation method as claimed by the Applicants uses irradiation and heat to remove the removable layer, neither heat nor irradiation is needed in any of the other proposed alternatives, and thus materially different. Die cutting involves a cutting step that cuts away material by using a bladed instrument. Manual separation involves only the use of the users strength to remove one layer from another. Acidic/basic treatment involves applying a solution to the surface to be treated (here it is the removable layer surface) such that the acidic or basic solution weakens the connection between the removable layer and the connected layer and/or dissolves the removable layer from the other layers. Therefore, the Examiner maintains the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/50480 in view of JP 09-194811 and *Expancel Microspheres: An Introduction* (herein referred to as *Expancel*).

WO '480 teaches a laminate comprising a peelable top layer (p. 4, lines 20-25), a substrate (p. 4, lines 10-14), and a bonding layer between the top layer and the substrate (p. 2, lines 20-27). At least one of the top and bottom layers is porous (p. 6, lines 3-5 and 9-13). The bonding layer comprises an aqueous dispersion (p. 10, lines 13-20) containing a polymer which has a tensile strength of 1-28 MPa ("at least 3.5 N/cm" (which is inclusive of all values greater than 3.5 N/cm); p. 6, line 27 to p. 7, line 5). The bonding layer further comprises microspheres with polymeric shells (p. 13, lines 18-19). The top layer is selected from a decorated metal plate or a plastic sheet (p. 6, lines 3-5 and 9-13). The substrate is a porous board (p. 6, lines 3-5 and 9-13). The amount of microspheres is in a range of 2 to 100 parts by weight with respect to 100 parts by solid content of polymer in the aqueous dispersion (p. 3, lines 13-14). WO '480 does not explicitly state the elongation value of the adhesive, but teaches that the peel adhesive strength may vary depending on the parameters of the system (p. 6, lines 27-28). Therefore, it would have been obvious to one of ordinary skill at the time Applicant's invention was made to have modified the elongation value of the adhesive such that it falls within the Applicant's

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claimed range depending on the desired end product and parameters of the system. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the elongation value of the adhesive since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

WO '480 further teaches the use of polyepoxy resinous adhesives but fails to explicitly teach the use of an ethylene vinyl acetate (EVA) copolymer with an anionic polyurethane dispersion. WO '480 also fails to teach the use of expandable, gas-filled microspheres with the claimed expanding magnification values and expanding start temperature.

JP '811, however, teaches the use of an ethylene vinyl acetate copolymer in an anionic polyurethane aqueous emulsion wherein the EVA emulsion is at least 70% wt. toluene insoluble (see Abstract). JP '811 teaches the aforementioned adhesive composition for the purpose of providing an adhesive that is useful for adhering wood and PVC sheets and adhering identical or different materials of PVC films and sheets, polystyrene, surface treated polyethylene, polypropylene, paper, fibers, wood, concrete, slate, calcium silicate, and aluminum foil wherein the adhesive composition has high levels of dry and water resistant adhesive properties, and improved heat resistance creep properties and excellent workability (see Abstract). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a polyepoxy adhesive resin to include an EVA/polyurethane adhesive for the purpose of providing an adhesive that is useful for adhering wood and PVC sheets and adhering identical or different materials of PVC films and sheets, polystyrene, surface treated polyethylene, polypropylene, paper, fibers, wood, concrete, slate,

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calcium silicate, and aluminum foil wherein the adhesive composition has high levels of dry and water resistant adhesive properties, and improved heat resistance creep properties and excellent workability as taught by JP '811.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified WO '480 to include an EVA/polyurethane resinous adhesive as taught by JP '811 in order to provide an adhesive that is useful for adhering wood and PVC sheets and adhering identical or different materials of PVC films and sheets, polystyrene, surface treated polyethylene, polypropylene, paper, fibers, wood, concrete, slate, calcium silicate, and aluminum foil wherein the adhesive composition has high levels of dry and water resistant adhesive properties, and improved heat resistance creep properties and excellent workability.

Expancel teaches the use of gas-filled polymer shelled microspheres wherein the expanding magnification of the shells is 40 times and the expanding start temperature is between 80 and 190 degrees Celsius (see p. 1 of pamphlet). *Expancel* teaches the use of gas-filled microspheres for the purpose of providing an adhesive with a filler comprising outstanding weight reduction to the adhesive while also providing shock, vibration, and sound absorption properties (see pgs. 7-8). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have provided a microsphere-containing adhesive with expandable microspheres for the purpose of providing an adhesive with a filler comprising outstanding weight reduction to the adhesive while also providing shock, vibration, and sound absorption properties as taught by *Expancel*.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified WO '480 to include expandable microspheres as taught by *Expancel* in order to provide an adhesive with a filler comprising outstanding weight reduction to the adhesive while also providing shock, vibration, and sound absorption properties.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/50480 in view of JP 09-194811 and *Expancel Microspheres: An Introduction* (herein referred to as *Expancel*), and further in view of Bernard et al. (#5,240,989).

WO '480, JP '811, and *Expancel* teach a laminate as detailed above. The aforementioned prior art fails to teach the use of a polyurethane dispersion with sulfonate groups.

Bernard et al., however, teach a removable adhesive comprising anionic sulfonate dispersions (Col. 5, line 47 to Col. 6, line 16). Bernard et al. teach the use of anionic sulfonate dispersions for the purpose of maintaining the stability of the adhesive while preventing coagulation of the adhesive (Col. 5, line 47 to Col. 6, line 16). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified an adhesive by adding an anionic sulfonate dispersion for the purpose of maintaining the stability of the adhesive while preventing coagulation of the adhesive as taught by Bernard et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the aforementioned prior art by including an anionic sulfonate dispersion as taught by Bernard et al. in order to maintain the stability of the adhesive while preventing coagulation of the adhesive.

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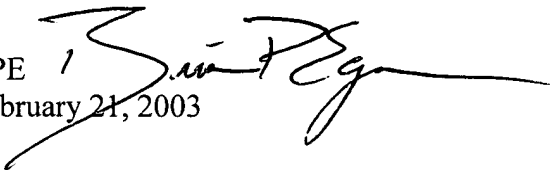
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE
February 21, 2003



HAROLD PYON
SUPERVISORY PATENT EXAMINER
1972 2/21/03